

Emerald Ash Borer Report

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Ash Borer cost could be \$1.5 million

February 18, 2013-By John P. Huston, Chicago Tribune reporter

Highland Park officials will soon be faced with paying for a program to remove more than 6,000 public ash trees that are expected to fall prey to the emerald ash borer that has infested the area.

City Forester Joe O'Neill said Highland Park has 4,125 ash trees of various varieties on public parkway, plus as many as 2,000 more on publicly maintained areas such as the bicycle trail. A five-year projection shows it would cost \$1.52 million to remove infected trees and plant replacements.

That schedule, which includes consistent annual costs, could be sped up if the current drought continues, O'Neill said.

Emerald ash borer beetles pose "an attack on the vascular system of the tree, essentially, and that's what conducts the water from the roots to the crown of the tree," O'Neill said a recent committee-of-the-whole meeting of the city council. "And the fact that it's already stressed from the drought, it doesn't take much damage to show more effect on the tree."

Highland Park first detected the emerald ash borer in 2011, and expects it to destroy all the ash trees in town. Those trees on private property are also susceptible and must be treated or removed at the owners' expense.



Councilwoman Sally Higginson proposed identifying ways for private owners to work with the city to find economies of scale when several trees are being removed from specific areas of town. Such collaborations may not bear fruit for private homeowners because they are not required — as the city is — to hire contractors at prevailing wage, according to Highland Park Public Works Director Ramesh Kanapareddy.

Councilman James Kirsch recommended seeking private contributions to help the city respond to the predicament. "This is a community-wide problem and I know this is a community that loves their trees," said Kirsch, who is not running for re-election in April. "As you go through the budgeting cycle, I think it's going to be important to get community buy-in and see what kind of alternative sources of revenue we can come up without raising permit fees or taxes in order to accomplish this goal." Kirsch said he has been impressed during his time on the City Council with O'Neill's workload. "He's so busy without this crisis," Kirsch said. "I mean, this is monumental. So we have to think about this in the context of really providing the proper resources so that he can continue to do what he was doing before this infestation came upon us." Infestation has accelerated lately because of the drought, O'Neill said, but with a diversity of species in town, "that's going to help us reduce the visual impact of this, as well as the financial impact."

Still, certain streets, like Tennyson, Malory and Keats lanes, in a northwest area of the city, as well as portions of Greenwood Avenue, will receive additional attention because of the larger ratio of ash trees, O'Neill said.

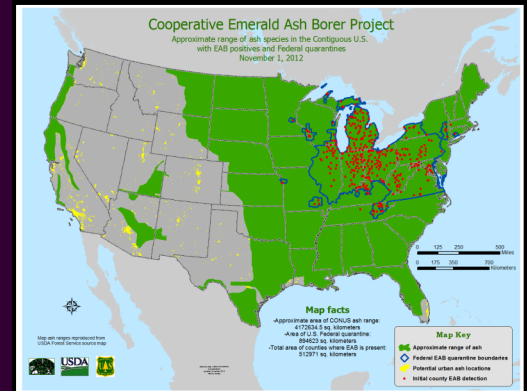
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Links to EAB Maps:

Native and Potential Urban Range of Ash in CONUS

The maps following this thematic map provide a finer scale view of regulated areas and detections of EAB. This native and potential urban range map of ash provides another observation of those features from a coarser scale.

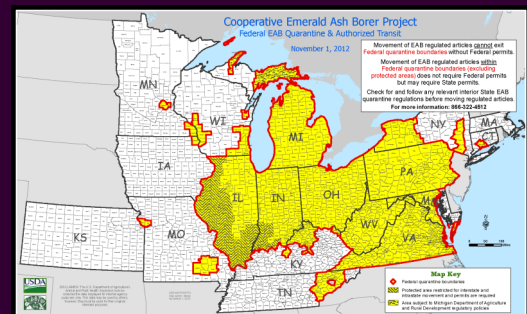


EAB Quarantine Map

Note: Federal EAB quarantine change became effective July 1st, 2012.

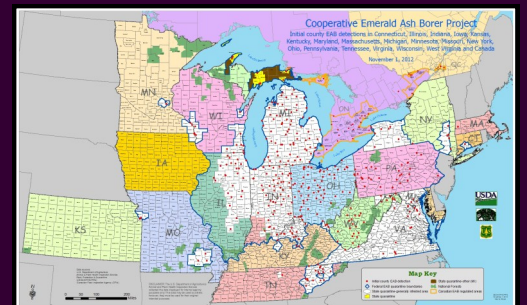
More information on this quarantine change can be found at:

http://www.aphis.usda.gov/plant_health/plant_pest_info/emerald_ash_b/downloads/DA-2012-18.pdf



EAB Detection and Quarantine Map

This map depicts the initial EAB detection in each county and replaces the map showing all known EAB detections. All detections are still tracked and recorded by the EAB Program but for illustrative purposes this map provides a clearer view of EAB's known distribution in the United States and Canada.

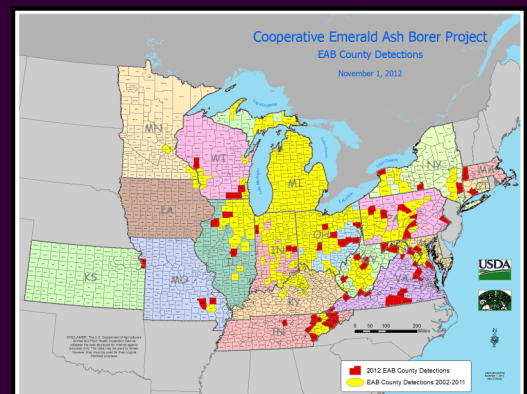


2013 EAB New County Detections Map

This map displays the initial detections of EAB by county. All new county detections occurring prior to 2013 are filled yellow while new county detections for 2013 are filled red.

There were 74 new county detections in calendar year 2012; 39 in non-Federally quarantined areas.

2012 EAB New County Detections Map



- NEW** Ball diamonds as habitat for nests of *Cerceris fumipennis* (Hymenoptera: Crabronidae): Comparisons among three states. Nalepa, C.A., Teerling, C., Rutledge, C.E., Swink, W., and Areliano, C. 2012. Journal of the Kansas Entomological Society.
- NEW** Estimates of *agrilus planipennis* infestation rates and potential survival of ash. Marshall, J.M., Smith, E.L., Mech, R., Storer, A.J. 2013. American Midland Naturalist.
- NEW** The welfare impacts of an invasive species: Endogenous vs. exogenous price models. McDermott, S.M., Finnoff, D.C., Shogren, J.F. 2013. Ecological Economics.
- NEW** Factors affecting the survival of ash (*Fraxinus* spp.) trees infested by emerald ash borer (*Agrilus planipennis*). Knight, K.S., Brown, J.P., Long, R.P. 2013. Biological Invasions.
- NEW** Buprestidae collected as prey by the solitary, ground-nesting philanthine wasp *cerceris fumipennis* (Hymenoptera: Crabronidae) in North Carolina. Swink, W.G., Paiero, S.M., Nalepa, C.A. 2013. Annals of the Entomological Society of America.
- NEW** Visual and chemical cues affecting the detection rate of the emerald ash borer in sticky traps. Domingue, M.J., Lelito, J.P., Fraser, I., Mastro, V.C., Tumlinson, J.H., Baker, T.C. 2013. Journal of Applied Entomology.
- NEW** The relationship between trees and human health: Evidence from the spread of the emerald ash borer. Donovan, G.H., Butry, D.T., Michael, Y.L., Prestemon, J.P., Liebhold, A.M., Gatzliolis, D., Mao, M.Y. 2013. Journal of Preventive Medicine.
- NEW** Towards the development of an autocontamination trap system to manage populations of emerald ash borer (Coleoptera: Buprestidae) with the native entomopathogenic fungus, *Beauveria bassiana*. Lyons, D. B., R. Lavallee, G. Kyei-Poku, K. Van Frankenhuyzen, S. Johny, C. Guertin, J. A. Francese, G. C. Jones, and M. Blais. 2012. Journal of Economic Entomology.
- The effect of bark thickness on host partitioning between *Tetrastichus planipennisi* (Hymen: Eulophidae) and *Atanycolus* spp. (Hymen: Braconidae), two parasitoids of emerald ash borer (Coleop: Buprestidae). Kristopher J. A., J. J. Duan, L. Bauer, J. P. Lelito, R. G. Van Driesche. 2012. Biological Control, 63:320-325.
- Characterization and virulence of *Beauveria* spp. recovered from emerald ash borer in southwestern Ontario, Canada. Johny, S., G. Kyei-Poku, D. Gauthier, K. Frankenhuyzen, and P. J. Krell. 2012. Journal of Invertebrate Pathology, doi: 10.1016/j.jip.2012.05.008.
- Estimates of the potential cost of emerald ash borer (*Agrilus planipennis* Fairmaire) in Canadian municipalities. McKenney, D.W., J. H. Pedlar, D. Yemshanov, B. D. Lyons, K. L. Campbell, and K. Lawrence. 2012. Arboriculture and Urban Forestry, 38: 81-91.
- To treat or remove: An economic model to assist in deciding the fate of ash trees threatened by emerald ash borer. McKenney, D.W., and J. H. Pedlar. 2012. Arboriculture and Urban Forestry, 38: 121-129.
- mRNA profiles of piRNA pathway genes in emerald ash borer, *Agrilus planipennis*. Mittapalli, O., P. Mamidala, and S. P. Rajarapu. 2012. Insect Science, doi: 10.1111/j.1744-7917.2011.01466.x.
- Toward pest control via mass production of realistic decoys of insects. Pulsifer, D.P., A. Lakhtakia, J. Kumar, T. C. Baker, and R. J. Martin-Palma. 2012. Proceedings of SPIE - The International Society for Optical Engineering, Vol. 8339.
- Validation of reference genes for gene expression studies in the emerald ash borer (*Agrilus planipennis*). Rajarapu, S.P., P. Mamidala, and O. Mittapalli. 2012. Insect Science, 19: 41-46.
- Could phenotypic plasticity limit an invasive species? Incomplete reversibility of mid-winter deacclimation in emerald ash borer. Sobek-Swant, S., J. C. Crosthwaite, D. B. Lyons, and B. J. Sinclair. 2012. Biological Invasions, 14: 115-125.

From Science:

Attraction of *Agrilus planipennis* (Coleoptera: Buprestidae) to a volatile pheromone: Effects of release rate, host volatile, and trap placement. Ryall, K. L., P. J. Silk, P. Mayo, D. Crook, A. Khrimian, A. A. Cossé, J. Sweeney, and T. Scarr. 2012. *Environmental Entomology*, 41: 648-656.

Potential distribution of emerald ash borer: What can we learn from ecological niche models using Maxent and GARP? Sobek-Swant, S., D. A. Kluza, K. Cuddington, and D. B. Lyons. 2012. *Forest Ecology and Management*, 281: 23-31.

Hypocotyl derived in vitro regeneration of pumpkin ash (*Fraxinus profunda*). Stevens, M. E., and P. M. Pijut. 2012. *Plant Cell Tissue and Organ Culture*, 108: 129-135.

Assessing street tree diversity in four Ohio communities using the weighted Simpson index. Subburayalu, S. and T. D. Sydnor. 2012. *Landscape and Urban Planning*, 106: 144-50.

Differential persistence of blue ash and white ash following emerald ash borer invasion. Tanis, S. R. and D. G. McCullough. 2012. *Canadian Journal of Forest Research*, 42: 1542-1550.

Cold temperature and emerald ash borer: Modelling the minimum under-bark temperature of ash trees in Canada. Vermunt, B., K. Cuddington, S. Sobek-Swant, and J. Crosthwaite. 2012. *Ecological Modelling*, 235-236: 19-25.

Predicting emerald ash borer, *Agrilus planipennis* (Coleoptera: Buprestidae), landing behavior on unwounded ash. Marshall, J. M., M. J. Porter, and A. J. Storer. 2012. *Great Lakes Entomologist*, 45: 29-39.

The effect of bark thickness on host partitioning between *Tetrastichus planipennisi* (Hymen: Eulophidae) and *Atanycolus* spp. (Hymen: Braconidae), two parasitoids of emerald ash borer (Coleop: Buprestidae). Abell, K. J., J. J. Duan, L. Bauer, J. P. Lelito, and R. G. Van Driesche. 2012. *Biological Control*, DOI: 10.1016/j.biocontrol.2012.08.009.

Impacts of the emerald ash borer (*Agrilus planipennis* Fairmaire) induced ash (*Fraxinus* spp.) mortality on forest carbon cycling and successional dynamics in the eastern United States. Flower, C. E., K. S. Knight, and M. A. Gonzalez-Meier. 2012. *Biological Invasions*, DOI: 10.1007/s10530-012-0341-7.

Potential impacts of emerald ash borer invasion on biogeochemical and water cycling in residential landscapes across a metropolitan region. Fissore, C., J. P. McFadden, K. C. Nelson, E. B. Peters, S. E. Hobbie, J. Y. King, L. A. Baker, I. Jakobsdottir. 2012. *Urban Ecosystems*, 15:1015-1030.

New York DEC to expand crackdown on Emerald Ash Borer

By Haley Viccaro—Albany Bureau

ALBANY — The state plans to propose a new revision to its Emerald Ash Borer quarantine order to add areas south of the state Thruway and east to the state border, DEC Commissioner Joseph Martens announced Tuesday.

The borer is an insect that kills ash trees in entire areas or communities where the insect has become established. The proposed revision would exclude Rockland, Westchester, Nassau and Suffolk counties as well as New York City.

“DEC will continue its efforts to assist communities and landowners prepare for, mitigate and respond to the impacts of EAB’s spread across the state,” Martens said in a statement. “Ongoing outreach and education are key in these efforts and will continue to be a focus in slowing the spread of EAB.”

The quarantine expansion would include 22 counties and the proposed regulations would take effect on May 1 if approved. The borer can be found in 18 states and was first discovered in the U.S. in 2002.

Borers that have traveled long distances most likely moved with ash firewood or ash nursery stock, the DEC said. Ash trees make up about 8 percent of all trees in the state, and forest-based manufacturing contributes over \$9 billion to the economy.

The insects were first seen in this country in 2002 in south-east Michigan, and are thought to have come here from their native east Asia via a freight shipment. They were first seen in New York state almost four years ago in Cattaraugus County, and spread from there. Monroe County was added to the quarantine area in the fall of 2010. The borer’s continued spread prompted the latest expansion.

“This configuration will assist in our efforts to slow the movement of EAB while mitigating some of the economic issues created by the prior quarantine configuration,” said Darrel Aubertine, commissioner of the State Department of Agriculture and Markets, who is also helping to expand the EAB quarantine.

In 2008 the state enforced a ban on untreated firewood entering the state and restricted movement of firewood by limiting travel within a 50-mile radius. The DEC said individuals should watch for signs of EAB infestation to help curb the issue statewide.

Individuals can [report an EAB infestation](#) or [learn more about EAB, firewood regulations and precautions](#) to help limit the spread of the population by visiting the [DEC’s website](#).

Also in the Press:

[Emerald ash borer in Clay, could be in Vigo](#)

MENAFN.COM

TERRE HAUTE, Feb 16, 2013 (Menafn - The Tribune-Star - McClatchy-Tribune Information Services via COMTEX) --The emerald ash borer, which is destroying ash trees throughout the East and Midwest, is already in Clay County and is likely in Vigo County.

[Emerald Ash Borer Claims Hundreds Of Anderson Township Trees](#)

WKRC TV Cincinnati

Emerald Ash Borer Claims Hundreds Of Anderson Township Trees. Video. Vineyard Ash Trees. Set Text Size Small, Set Text Size Medium, Set Text Size Large, Set Text Size X-Large. Print Story. Published: 2/15 4:13 pm. Share. Updated: 2/15 9:32 pm ...

[New tool in the fight against the Emerald Ash Borer](#)

Pittsburgh Post Gazette (blog)

The Emerald Ash Borer is an invasive insect which was discovered about 20 years ago in Michigan and have moved east since. It's from Asia and doesn't have natural predators here. The pests are destroying ash trees all along the eastern half or the ...

From the States:

Illinois:

Illinois Department of Agriculture

Field Staff activities – During the reporting period, EAB field staff members were focused on conducting inspections and outreach visits in Kane, DuPage, Will, Kendall, and DeKalb counties. During the reporting period, four compliance inspections with four people present and 16 outreach contacts were made with 18 people present. Staff visually inspected 161 trees; none of which were positive for EAB.

www.IllinoisEAB.com activity – Visits to the Emerald Ash Borer page on the Department's website totaled 516 during the reporting period.

EAB quarantine compliance agreements – The Department issued one new compliance agreement and discontinued no existing compliance agreements during the reporting period. The total number of current compliance agreements is now 1,526.

State Firewood Importer Certification – During the reporting period, the Department issued no firewood importer certificates leaving the total number of certificates issued for the 2013 calendar year at 17.

Previous year totals – 2012:	44 firewood importer certificates issued
2011:	43 firewood importer certificates issued
2010:	45 firewood importer certificates issued

U.S. Department of Agriculture

The ASC A300 Tree Care Operations Standards Committee is adding a new subsection, A300 Part 11 – Harvesting, for harvesting urban and community trees to yield highest value use, including both milled and non-milled urban forest products. Members of the Illinois Wood Utilization Committee, along with urban forestry and wood industry leaders will be participating in a preliminary review process for this new addition to the American National Standards Institute (ANSI) A300 For Tree Care Operations – Tree, Shrub, and Other Woody Plant Management – Standard Practices managed by the Tree Care Industry Association.

From the States:

Minnesota:

Regulatory:

Statewide:

PPQ and MDA staff conducted thirteen regulatory/outreach site visits outside the quarantine. The facilities included sawmills, tree care companies, loggers, and firewood producers. The purpose was to ensure compliance and provide information and outreach material. No issues were noted at the facilities.

Quarantined Counties (Hennepin, Ramsey, Houston and Winona):

PPQ and MDA staff renewed two joint compliance agreements: one mulching operation with multiple sites within Hennepin and Ramsey Counties and a pallet producer. In addition one regulatory site visit was conducted at a pallet facility. The facility does not use ash material at this time. No issues found.

PPQ & MDA staff conducted a joint compliance check at a mill in SE MN. The site is a receiving mill outside the quarantine. Regulated ash material is being processed and two limited permits were issued for the movement of ash logs from the quarantine. The ash logs and lumber will be completely processed by May 1st. No issues found.

Minnesota State Websites:

Minnesota Department of Agriculture:

<http://www.mda.state.mn.us/en/plants/pestmanagement/eab.aspx>

University Of Minnesota Extension Service:

<http://www.extension.umn.edu/issues/eab/>

Minnesota Department of Natural Resources: <http://www.dnr.state.mn.us/invasives/terrestrialanimals/eab/index.html>

Credits and Contact Info

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